Section 3 – Applicable Requirements

3.0 Applicable Requirements

Regulations applicable to the proposed facility are discussed in this section.

3.1 Federal Requirements

The following includes the rules and regulations reviewed in preparation of this PTC application.

3.1.1 40 CFR § 52 - Prevention of Significant Deterioration (PSD)

The facility is not a PSD major facility and does not belong to any designated source category, therefore PSD review is not applicable.

3.1.2 40 CFR § 60 - New Source Performance Standards (NSPS)

40 CFR § 60-Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Affected Units:
1.) Boiler #1 (P106)
2.) Boiler #2 (P107)

60.40c – Applicability
The boilers are subject to requirements of Subpart Dc because the boilers are steam generating units with heat input capacity greater than 10 million BTU/hr but less than 100 million BTU/hr and will be constructed or modified after June 9, 1989.

Because the boilers will only combust natural gas, the facility will only be subject to the reporting and record keeping requirements listed in § 60.48c.

§ 60.48c Reporting and recordkeeping requirements.
The following information is required to be submitted:

> *(a)* Notification of the date of construction or reconstruction and actual startup. Provide heat input capacity of the facility and the identification of fuels to be combusted in the affected facility.

The following information is required to be recorded and maintained:
(g)(2) Record and maintain records of the amount of each fuel combusted during each calendar month.

Records required under this section are to be maintained by the operator for two years.

The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

40 CFR § 60-Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Affected Units:
1.) Emergency Generator (P108)

60.4200 – Am I subject to this subpart?
The emergency generator is subject to this part because it is a compression ignition internal combustion engine with a displacement less than 30 liters per cylinder that will be constructed on or after 2007.

The IMP facility will be classified as an area source and therefore the generator will be exempt from the obligation to obtain a permit under 40 CFR part 70 or part 71.

60.4205 – What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
Must comply with requirements listed in 40 CFR 89.112 and 40 CFR 89.113.

60.4207 – What fuel requirements must I meet if I am an owner of a stationary CI internal combustion engine subject to this part?
Specific fuel requirements are listed in 40 CFR 80.510(a) and 80.510(b).

60.4209 – What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
Must install a non-resettable hour meter prior to startup of the engine.

60.4211 – What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?
Maintenance checks and readiness testing of the unit is limited to 100 hours per year. There is no time limit on operation of the unit in emergency situations. Any operation other than emergency operation, and maintenance and testing is not allowed.

60.4214 – What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
If the emergency generator does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

3.1.3 40 CFR § 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs) & Maximum Achievable Control Technology (MACT)

There are no applicable NESHAPs or MACT for this facility.

3.2 State Requirements

Applicable state requirements include the following. All citations refer to specific sections of IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho.

123. CERTIFICATION OF DOCUMENTS.

All documents, including but not limited to, application forms for permits to construct, application forms for operating permits, progress reports, records, monitoring data, supporting information, testing reports or compliance certifications submitted to the Department shall contain a certification by a responsible official.

128. CONFIDENTIAL INFORMATION

Not applicable as no confidential information is being submitted.

201 - PERMIT TO CONSTRUCT REQUIRED

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)
7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

The proposed facility is a new synthetic minor source, a PTC is required.

203. PERMIT REQUIREMENTS FOR NEW AND MODIFIED STATIONARY SOURCES

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)

7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

Emission calculations are based on the facility operating at the maximum milk processing rate of 3 million pounds per day. Membrane design specifications will provide a physical bottleneck that will limit milk processing to 3 million pounds per day. If necessary to accommodate IDEQ requirements, the facility is willing to accept the following process limits:

- Raw Milk = 3 million pounds per day
- MPC Powder = 5,976 lb/hr
- Skim Milk Powder = 13,491 lb/hr
- Permeate Powder = 9,096 lb/hr

The following limits are required for the facility:

- Operation and maintenance of baghouses (P101A and B, P102, P104, P105) and a scrubber (P103) to prevent excess emissions of particulate matter;
- Maximum total boiler (P106 and P107) natural gas combustion of 287.5 million scf/year; and
- Limit the emergency generator to 500 total hours per year of operation and 100 hours per year for maintenance purposes.

The facility anticipates that the IDEQ will require permit conditions for the plant to protect the National Ambient Air Quality Standards (NAAQS), to comply with the toxic air pollutant (TAP) standards, to comply with the grain loading standard for fuel burning equipment, and the reasonable control of fugitives.

210. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS

210.01. Identification of Toxic Air Pollutants.

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) Permeate Dryer (P103)
3.) Boiler #1 (P106)
4.) Boiler #2 (P107)
5.) Emergency Generator (P108)

All TAP emitted by these emission units shall be identified. These compounds are listed in Section 4.

210.02. Quantification of Emission Rates

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) Permeate Dryer (P103)
3.) Boiler #1 (P106)
4.) Boiler #2 (P107)
5.) Emergency Generator (P108)

Emission rates of all TAP shall be estimated. Toxic emissions were estimated using emission factors. This analysis is presented in Section 4.

210.03. Quantification of Ambient Concentrations

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)
7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

Ambient concentrations at appropriate receptor sites were estimated as described in Section 7.

210.04. Preconstruction Compliance Demonstration

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)
7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

Preconstruction compliance for each identified TAP is demonstrated by the modeling described in Section 7. Where appropriate, the limitations on potential to emit (PTE) described in Section 4 were included in this analysis.

213 - PRE-PERMIT CONSTRUCTION

213.01. Pre-Permit Construction Eligibility

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)
7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

213.01(a): The owner or operator shall apply for a permit to construct.

This application is submitted to satisfy this requirement.

213.01(b): The owner or operator shall consult with Department representatives prior to submitting a pre-permit construction approval application.

This requirement was satisfied by meeting with Mr. William Rogers, Mr. Darrin Mehr, and Mr. Morrie Lewis on October 16, 2007.

213.01(c): *The owner or operator shall submit a pre-permit construction approval application which must contain, but not be limited to: a letter requesting the ability to construct before obtaining the required permit to construct, a copy of the notice referenced in Subsection 213.02; proof of eligibility; process description(s); equipment list(s); proposed emission limits and modeled ambient concentrations for all regulated air pollutants, such that they demonstrate compliance with all applicable air quality rules and regulations. The models shall be conducted in accordance with Subsection 202.02 and with written Department approved protocol and submitted with sufficient detail so that modeling can be duplicated by the Department.*

These required elements are included in this application package.

213.01(d): *Owners or operators seeking limitations on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must describe in detail in the pre-permit construction application the proposed restrictions and certify in accordance with Section 123 that they will comply with the restrictions, including any applicable monitoring and reporting requirements. The required description of PTE limitations is included in Section 4.*

The required certification is included in the cover letter accompanying this application.

213.02. Permit To Construct Procedures For Pre-Permit Construction
Within ten (10) days after the submittal of the pre-permit construction approval application, the owner or operator shall hold an informational meeting in at least one

(1) location in the region in which the stationary source or facility is to be located. The informational meeting shall be made known by notice published at least ten (10) days before the meeting in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. A copy of such notice shall be included in the application.

The required public meeting will be held on October 25, 2007. A copy of the required notice is included in Appendix 2.

214. DEMONSTATION OF PRECONSTRUCTION COMPLIANCE FOR NEW AND RECONSTRUCTED MAJOR SOURCES OF HAZARDOUS AIR POLLUTANTS

The proposed emission sources are not considered Major Facilities so this section does not apply.

220. GENERAL EXEMPTION CRITERIA FOR PERMIT TO CONSTRUCT EXEMPTIONS
222. CATEGORY II EXEMPTION

Affected emission units:
1.) Emergency Generator (P108)

The emergency generator at the facility qualifies for a Category II Exemption (IDAPA 58.01.01.222.d) since it will only combust natural gas or diesel fuel and it will be operated for less than 500 hours per year.

223. EXEMPTION CRITERIA AND REPORTING REQUIREMENTS FOR TOXIC AIR POLLUTANT EMISSIONS.

Not applicable as no exemptions are being claimed.

577. AMBIENT AIR QUALITY STANDARDS FOR SPECIFIC AIR POLLUTANTS.

Compliance with all applicable ambient air quality standards is discussed in Section 7.

578. DESIGNATION OF ATTAINMENT, UNCLASSIFIABLE, AND NONATTAINMENT AREAS.

Not applicable to applicant - designation of attainment, unclassifiable, and nonattainment areas is the responsibility of IDEQ. Current attainment status of the facility location is discussed in Section 5.

585. TOXIC AIR POLLUTANTS NON-CARCINOGENIC INCREMENTS.

Compliance with AACs is addressed in Sections 4 and 7.

586. TOXIC AIR POLLUTANTS CARCINOGENIC INCREMENTS.

Compliance with AACCs is addressed in Sections 4 and 7.

590. NEW SOURCE PERFORMANCE STANDARDS.

Affected Units:
1.) Boiler #1 (P106)
2.) Boiler #2 (P107)
3.) Emergency Generator (P108)

Compliance with NSPS is discussed in Section 3.1.

591. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS.

Compliance with NESHAPs is discussed in Section 3.1.

625. VISIBLE EMISSIONS.

Affected Units:
1.) MPC/Skim Milk Dryer Burner (P101A and P101B)
2.) MPC/Skim Fluid-Bed (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed (P104)
5.) Permeate Powder Receiver (P105)
6.) Boiler #1 (P106)
7.) Boiler #2 (P107)
8.) Emergency Generator (P108)

A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by this section.

This requirement is applicable to all emission units listed above.

650. RULES FOR CONTROL OF FUGITIVE DUST.
All reasonable precautions shall be taken to prevent particulate matter from becoming airborne. In determining what is reasonable, consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities and atmospheric conditions which might affect the movement of particulate matter. Some of the reasonable precautions may include, but are not limited to, the following:

01. Use Of Water Or Chemicals. Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
02. Application Of Dust Suppressants. Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
03. Use Of Control Equipment. Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials.
04. Covering Of Trucks. Covering, when practical, open bodied trucks transporting materials likely to give rise to airborne dusts.
05. Paving. Paving of roadways and their maintenance in a clean condition, where practical. Note: all truck traffic areas will be paved.

675. FUEL BURNING EQUIPMENT -- PARTICULATE MATTER.
And
676. STANDARDS FOR NEW SOURCES.
And
677. STANDARDS FOR MINOR AND EXISTING SOURCES.

Affected units:
1.) Boiler #1 (P106)
2.) Boiler #2 (P107)

Compliance with particulate matter emission limits is discussed in Section 4 and/or Appendix 1.

700. PARTICULATE MATTER -- PROCESS WEIGHT LIMITATIONS.
And
710. PARTICULATE MATTER -- PROCESS EQUIPMENT EMISSION LIMITATIONS ON OR AFTER JULY 1, 2000.

Affected Units:
1.) MPC/Skim Milk Dryer Burner Baghouses (P101A and P101B)
2.) MPC/Skim Fluid-Bed Baghouse (P102)
3.) Permeate Dryer (P103)
4.) Permeate Fluid-Bed Baghouse (P104)
5.) Permeate Powder Receiver Baghouse (P105)

The maximum raw product input to these processes is 3.0 million pounds of raw milk per day. Based on the equation included in this section, the maximum allowable emission rate from each source is 20.68 lb/hr. Section 4 and Appendix 1 demonstrates compliance with this rule.

775. RULES FOR CONTROL OF ODORS.

And
776. GENERAL RULES.

No emission of odorous gases, liquids or solids into the atmosphere in such quantities as to cause air pollution will be allowed.